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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,455	02/07/2002	Ikuo Kawamoto	020587	1845

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EXAMINER	
CHOWDHURY, TARIFUR RASHID	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,455	KAWAMOTO ET AL.	
	Examin r	Art Unit	
	Tarifur R Chowdhury	2871	

-- The MAILING DATE of this communication appears on the c ver sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the claims

1. Currently claims 1-30 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-8, 11-16 and 19-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama et al., (Kameyama), USPAT 5,999,243 (provided by the applicant) in view of Cobb.

5. Kameyama discloses and shows in Fig. 6, a liquid crystal display including a polarizing element wherein the polarizing element comprising a circularly polarized light separator (1) and quarter wave plate (3) (either only the circularly polarized –light

separator or the combination of the light-separator and the quarter wave plate being applicant's reflective polarizing plate) for separating incident light into reflected light and transmitted light both of which are composed of polarized light (col. 5, line 59 – col. 6, line 7; col. 12, line 6-56). Kameyama also discloses the use of pressure-sensitive adhesive to laminate multiple layers (col. 13, lines 28-47).

Kameyama differs from the instant invention because he does not explicitly disclose that the pressure-sensitive adhesive layer has diffusive properties.

Cobb discloses and shows in Fig. 1a, polarizing element including a reflecting polarizing plate (8) and a light-diffusion pressure-sensitive adhesive layer (6) (col. 2, lines 17-24, 56-60; col. 13, lines 27-30). Cobb also discloses that a polarizing element having a light-diffusion pressure-sensitive adhesive layer is advantageous since it provides higher reflectivity and better performance and thus able to contribute to enhanced display efficiency, brightness and contrast (col. 1, lines 44-47).

Cobb is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a polarizing element that includes a light-diffusion pressure-sensitive adhesive layer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display of Kameyama by providing a light-diffusion pressure-sensitive adhesive on the reflecting polarizing plate so that enhanced display efficiency, brightness and contrast is obtained, as per the teachings of Cobb.

Further, the method of manufacturing the polarizing element would have been obvious in view of the device.

Accordingly, claims 1, 2, 6, 7, 11-15, 20 and 25 would have been obvious.

As to claims 3, 4, 21 and 22, Kameyama discloses that the circularly polarized light separation plate (1) comprises a cholesteric liquid crystal polymer, which has undergone Grandjean orientation (col. 5, lines 59-61).

As to claims 5 and 23, Kameyama also discloses that the cholesteric liquid crystal layer can be a superimposed structure of cholesteric liquid crystal layers different from each other in a helical pitch of Grandjean orientation (col. 7, line 65- col. 8, line 3).

As to claims 8 and 16, Cobb also discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing uncolored transparent particles (col. 3, lines 14-34).

As to claims 19 and 24, Kameyama discloses that the polarizer of the invention is not limited to circularly-polarized light separator but also linearly-polarized light separator (col. 5, lines 51-55).

As to claims 26 and 29 Kameyama discloses (col. 13, lines 28-34) that in his invention, the layers constituting the optical element, e.g., a liquid crystal element (separation layer for circular light polarization), a retardation plate, a polarizing plate, and a light guide, can be united by laminating with each other through an adhesive. Thus it is clear from the disclosure of Kameyama that the polarizing element includes at least one adhesive layer besides the pressure-sensitive adhesive layer.

As to claims 27 and 30, Cobb shows that the pressure-sensitive adhesive layer (6) is disposed directly on the light separation plate (8).

As to claim 28, since the structure of Kameyama has a retardation plate on top of the light separation plate and Cobb shows that the pressure-sensitive adhesive layer is disposed on top of the light separation plate, the modified structure would have the pressure –sensitive adhesive layer between the retardation plate and the light separation plate.

6. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama and Cobb as applied to claims 1-8, 11-16 and 19-25 above and further in view of Mikura et al., (Mikura), USPAT 5,880,800.

7. Kameyama in view of Cobb discloses that the pressure-sensitive adhesive is made of a polymer but do not explicitly disclose the polymer is an acrylic polymer having a weight average molecular weight of at least 100,000.

Mikura discloses optical film having pressure sensitive adhesive layers wherein the pressure-sensitive adhesive layers are made of polymers wherein the polymer is an acrylic polymer having a weight average molecular weight of at least 300,000 (col. 1, line 5; col. 5, line 55 – col. 6, line 2). Mikura also discloses that such an optical film is excellent in heat resistance and moisture resistance (col. 1, lines 6-7).

Mikura is evidence that ordinary workers in the art would find a reason, suggestion or motivation to form pressure-sensitive adhesive layers using acrylic polymer having a weight average molecular weight of at least 300,000.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the pressure-sensitive adhesive layer of Kameyama when modified by Cobb such by using an acrylic polymer having a weight

average molecular weight of at least 300,000 so that an optical film with excellent heat resistance and moisture resistance is obtained, as per the teachings of Mikura.

Accordingly, claims 9 and 17 would have been obvious.

8. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama in view of Cobb as applied to claims 1-8, 11-16 and 19-25 above and further in view of Goetz et al., (Goetz), USPAT 6,288,172.

9. Kameyama in view of Cobb discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing uncolored transparent particles but does not explicitly disclose that the particles have an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Goetz discloses light diffusing adhesive that is made of organic polymer particles having an average diameter of about 0.5 μm to about 30 μm (overlaps the claimed range) (col. 12, lines 11-15). Goetz also discloses that such a light diffusion adhesive provides excellent light diffusion properties with low back scattering (col. 1, lines 12-14).

Goetz is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use light diffusion adhesive that has particles with an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the light diffusion adhesive of Kameyama when modified by Cobb by using organic particles having an average particle diameter

ranging from 0.5 μm to 30 μm so that a light diffusion adhesive with excellent light diffusion properties with low back scattering is obtained, as per the teachings of Goetz.

Response to Arguments

10. Applicant's arguments filed on 03/03/04 have been fully considered but they are not persuasive.

In response to applicant's argument that Kameyama fails to teach or suggest using a reflecting polarizing element comprising a circularly-polarized light separation plate to compensate color changes, it is respectfully pointed out to applicant that the argument is irrelevant since the recitation is not in the claim. Even though the claims are read in light of the specification, the specification is not read into the claims. Further, in response to applicant's argument that Kameyama suggests compensating color change by using one or several retardation layers, it is respectfully pointed out to applicant that Kameyama discloses (col. 9, lines 51 – col. 10, line 15) that if desired and necessary (emphasis added) a retardation layer may be used together with the polarizing element.

In response to applicant's argument that from the teaching of Cobb one would provide the diffuse adhesive layer on the retardation plate of Kameyama not on the circularly-polarized light separation plate or between the retardation plate and the circularly-polarized light separation plate, it is respectfully pointed out to applicant that Kameyama discloses that numeral 1 is the circularly-polarized light separation plate and numeral 3 is the retardation plate and since Cobb discloses that the diffuse adhesive layer is directly disposed on the light separation plate, from the teaching of Cobb, one would provide the diffuse adhesive layer on the circularly-polarized light separation plate

(1) of Kameyama which would provide a structure wherein the diffuse adhesive layer is between the circularly-polarized light separation plate and the retardation plate.

Therefore, the rejection was proper and thus maintained.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
May 18, 2004

TARIFUR R. CHOWDHURY
PRIMARY EXAMINER